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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Thomas Deck

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EXAMINER

DANG, HUNG Q

ART UNIT

PAPER NUMBER

2612

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/534,934	<b>Applicant(s)</b> DECK ET AL.	
	<b>Examiner</b> HUNG Q. DANG	<b>Art Unit</b> 2612	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 April 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 47,48 and 51-75 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 47,48 and 51-75 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. This communication is in response to the claims' amendment dated 4/29/2009. The amendment of claim 47 and the newly added claims 70-75 have been entered.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 47-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

**Regarding claims 47 and 48**, it is not clearly understood as to why there is a need for having the claimed **A/D converter for digitizing the measured signal**. As best understood by the Examiner, the "measured signal" is numerical time value corresponding to the time delay of the reflected transmitted signal. Said numerical time value is already in digital format. Therefore, it is not clearly understood as to why there is a need for having the claimed A/D converter.

***Response to Arguments***

4. Applicant's arguments with respect to claims 47-75 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Objections***

5. Claims 73-75 are objected to under 37 CFR 1.75(c) as being in improper form because of multiple dependent claims. See MPEP § 608.01(n). Accordingly, the claims 73-74 are not further treated on the merits.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 47, 48, 51, 53-56, 58, 60-71 and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michalski et al. U.S. Pub. 2004/0074295.

**Regarding claims 47 and 70**, Michalski et al. teaches a fill level sensor unit (abstract), comprising a measured signal receiver (figure 1 and paragraph [0026]; unit 6 is the receiver) registering a measured signal; a transceiver device (figure 1, unit 4) for transmitting data to an environmental device (figure 1, unit 14); a processor (figure 1, unit 4 is a control/evaluation circuit which is inherently equipped with a processor) is

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configured so that the measured signal is digitized and transmitted to the environmental device; wherein the sensor is a fill level sensor; and wherein the measured signal receiver transmits and receives one of a radar signal, an ultrasound signal and a guided microwave signal (paragraph [0012]).

However, Michalski et al. does not specifically disclose that **said processor is configured to only assume activating the measured signal receiver, the A/D converter, and the transceiver device** in such a way **that the measured signal is digitized and subsequently transmitted without signal processing after the A/D conversion**, via the transceiver device, to the environmental device, the environmental device being coupled to an analysis unit which converts the measured signal into a measured value.

The claimed invention concerns recording a "time delay value" starting when the measurement signal is transmitted, reflected off the surface of the fill level and received at the measured signal receiver. Said "time delay value" is then transmitted to a remotely located analysis unit to be converted into a "measured value". One of ordinary skill in the art would also recognize that such "time delay value" can also be alternatively locally converted into a "measured value" at the "measured signal receiver" and the converted "measured value" would then be transmitted to a remotely located monitor. Clearly, if the "time delay value" is designed to be converted into a "measured value" at a remote location, then NO signal processing of said "time delay value" would be locally required, and vice versa.

Clearly, if said "time delay value" is designed to be converted at a remote unit, the hardware requirement of said sensor unit would be preferably kept to the minimal, enough to perform the data transmission; in this case, the minimal hardware requirements would clearly be the measured signal receiver and the transceiver device. Regarding the claimed A/D converter, see the above 112 1st paragraph rejection. Even, for some reason, an A/D converter is required prior to data transmission in this case, one of ordinary skill in the art would recognize that if the "time delayed value" were originally, somehow, in analog format; then the minimal hardware would simply further include an A/D converter for converting said data from analog format into digital format prior to transmission.

Regarding the claimed **wireless** data transmission, the Examiner gives Official Notice that wireless transmission has been commonly equipped in many telemetry systems. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to alternatively provide wireless transmission to the system taught by Michalski et al. to wireless perform data communication.

**Regarding claim 48**, the input/output components claimed in claim 48 are implicitly suggested based on the rejection of claim 47 stated above.

**Regarding claim 51**, Michalski et al. also teaches that measured signal is a propagation time signal (paragraph [0014]).

**Regarding claims 54, 55 and 50**, the environmental device taught by Michalski et al. is also coupled to a process control system (see claim 1 of Michalski et al.; unit 14 is a process control system).

The Examiner gives Official Notice that wire/wireless coupling/connecting two devices have been commonly known and equipped in many communication systems. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide wire or wireless coupling or connection between the environmental device and the process control system disclosed by Michalski et al.

**Note:** Since the Applicant has not challenged the above given Official Notice, the given Official Notice has now become the Applicant's prior art admission.

See MPEP Par: 2144.03©

if applicant does not traverse the examiner's assertion of official notice or applicant's traverse is not adequate, the examiner should clearly indicate in the next Office action that the common knowledge or well-known in the art statement is taken to be admitted prior art because applicant either failed to traverse the examiner's assertion of official notice or that the traverse was inadequate. If the traverse was inadequate, the examiner should include an explanation as to why it was inadequate.

**Regarding claims 58 and 62**, as mentioned in the rejection of claim 47, Michalski et al. teaches a sensor unit being wirelessly coupled to an environmental device having a control. Even though, Michalski et al. does not specifically mention that said environmental device includes a **display**, however, the Examiner gives Official Notice that a display has been commonly provided in many monitor devices for displaying desired data to the user. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a display to the sensor system of Michalski et al. for displaying desired data. Even though, Michalski et al. only disclose one environmental device including a control and a display unit,

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however, it would have been obvious to one of ordinary skill in the art to further provide another environmental device so that the sensed data can be transmitted to another location/user for data processing.

**Regarding claim 64**, as stated in the rejection of claim 62, if the sensed parameter/status data is desired to be transmitted to another environmental device, then, obviously, said sensed parameter/status can also be transmitted to said further environmental device.

**Regarding claim 65**, even though Michalski et al. does not specifically teach that the analysis unit, a control and display unit are integrated into the environmental device, however, the Examiner gives Official Notice that such electronic components have been commonly integrated together in many electronic devices for the convenience of the operator. Also, the use of a one-piece construction instead of multiple separable pieces structure would be merely a matter of obvious engineering choice in design (see MPEP 2144.04 In re Larson design engineering choice and MPEP 2144.04 changes in size/proportion).

**Regarding claim 66**, even though Michalski et al. does not specifically mention an interface for a wire-bound data transmission, however, the Examiner gives Official Notice that interfaces for use with wire transmission have been commonly known and equipped in many electronic devices. Therefore, by conventionality, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an interface for wire-bound data transmission to the sensor unit disclosed by Michalski et al.



**Regarding claims 53, 56 and 61**, the Examiner gives Official Notice that bidirectional communication between any two devices has been conventionally equipped in many control/communication systems for data transmission or control operations. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide bidirectional communications between any of the two devices disclosed by Michalski et al.

**Note:** Since the Applicant has not challenged the above given Official Notice, the given Official Notice has now become the Applicant's prior art admission.

See MPEP Par: 2144.03©

if applicant does not traverse the examiner's assertion of official notice or applicant's traverse is not adequate, the examiner should clearly indicate in the next Office action that the common knowledge or well-known in the art statement is taken to be admitted prior art because applicant either failed to traverse the examiner's assertion of official notice or that the traverse was inadequate. If the traverse was inadequate, the examiner should include an explanation as to why it was inadequate.

**Regarding claim 63**, see the rejection of claim 52.

**Regarding claims 67 and 69**, see the rejection of claim 47. Even though, Michalski et al. does not specifically disclose a **plurality** of sensor units, however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a plurality of sensor units (similar as the sensor unit claimed in claim 47) to the system disclosed Michalski et al. so that a plurality of different parameters can be sensed and transmitted to a remote location for processing.

**Regarding claim 68**, see the rejection of claim 58.

**Regarding claim 72**, Bennett JR et al. also teaches a plurality of sensor units (see figure 3, sensors 60 and 60').

**Regarding claim 71**, Michalski et al. inherently teaches a memory arrangement coupled to the processor and storing parameters. (processors are inherently equipped with memories for data manipulation). Even though, Michalski et al. does not specifically teach calibration data for controlling a measurement sequence, however, one of ordinary skill in the art would recognize that calibration data has been commonly applied in many measurement systems in increase accuracy. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further provide calibration data to the sensor unit of Michalski et al. in order to increase accuracy in data measurements.

8. Claims 52, 57 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michalski et al. U.S. Pub. 2004/0074295 in view of Soliman U.S. Pub 2003/0174067.

**Regarding claim 52**, Michalski et al. teaches the sensor unit of claim 47. However, Michalski et al. does not specifically teach the wireless transmission of the data between the sensor unit and the environmental device using WLAN.

Soliman, in the same field of endeavor, discloses a wireless telemetry network, wherein a WLAN is employed between device-device transmission.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide WLAN for wireless transmission between the sensor unit and the environmental device disclosed by Michalski et al., as evidenced by

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Soliman, so that sensed data can be wirelessly transmitted to said environmental device.

**Regarding claims 57 and 59**, Michalski et al. teaches the sensor unit of claim 58. However, Michalski et al. does not teach said environmental device being a mobile device.

Soliman, in the same field of endeavor, teaches a wireless environmental telemetry network, wherein the environmental device is a mobile device (Figure 1, unit 140) so that said mobile device can be carried around.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the environmental device disclosed by Michalki et al. to be a mobile device, as evidenced by Soliman, so that said environmental device can be carried around by the operator.

### **Conclusion**

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG Q. DANG whose telephone number is (571)272-3069. The examiner can normally be reached on 9:30AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Zimmerman can be reached on (571) 272-3059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hung Q Dang/  
Examiner, Art Unit 2612

/Albert K Wong/  
Primary Examiner, Art Unit 2612